

Abstract

The invention relates to a device for detecting different conditions of a component (1), such as distorted conditions, movements and loaded conditions. Said device comprises a transmitter (2) and a receiver (3) which are located independently on at least one component at a distance from one another and an evaluation unit (4). The transmitter (2) emits an electromagnetic wave (such as e.g. a laser beam), or a focused particle beam to the receiver (3). The spatial resolution can be increased by multiple reflections from a mirror and a semi-transparent mirror (9).

Sub
all

List of reference numerals

- 1 component, railway track
 - 2 transmitter, laser
 - 3 receiver
 - 4 evaluation unit
 - 5 light beam, laser beam
 - 5' deflected laser beam
 - 6 reflector, reflective surface
 - 7 housing
 - 8 left-hand half of the housing
 - 8' right-hand half of the housing
 - 9 semi-transparent layer
 - 10 reflected light or laser beam
 - 11 transducer
 - 12 left holder
 - 12' right holder
 - 13 exit point for the laser
 - 14 striking point for the laser
 - 15 bore
 - 16 stud bolts
 - 16' stud bolts
 - 17 pin connection
 - 17' pin connection
 - 18 connection
 - 18' connection
 - 19 light-sensitive surface, PSD transducer
 - 20 plate
 - 21 clamping element
 - 22 contact part
 - 22' contact part
 - 23 bore
 - 24 bore
 - 25 rail foot
 - 26 short leg of 21
 - 26' long leg of 21
-